

**Table S8:** QTL of IBS analysis across TEs. Chromosome (Chr.), position (Pos.), support interval (SI), FDR p-value, proportion of phenotypic variance explained ( $R^2$ ), and additive effect (Eff.) of the minor allele are given for the traits powdery mildew (PM), septoria tritici blotch (STB), tan spot (TS), plant height (PH), ear emergence time (EET) and leaf angle distribution (LAD). The detection of a QTL within a TE is specified (TE), additionally.

Trait	Chr.	Pos. (cM)	SI (cM)	P-value	$R^2$ *	Eff.	TE
PM[1-9]					<b>25.3</b>		
	1A	3	0-3	2.6E-06	8.3	-1.6	16RG, 17FS1
	6B	217	217-217	9.9E-03	4.3	-1.1	16RG, 17FS1
	7A	387	384-387	2.9E-09	11.7	-1.8	16RG, 17FS1
STB [%]					<b>17.7</b>		
	1B	329	329-329	8.5E-03	4.1	7.2	17FS1
	2B	229	214-237	9.7E-04	5.4	-8.5	17FS1
	2D	20	20-20	1.1E-05	8.6	-10.7	16FS1, 17FS1
TS [%]					<b>41.9</b>		
	2A	93	93-94	4.0E-03	3.6	6.8	
	2A	158	158-161	7.0E-03	3.2	5.8	
	2B	161	161-161	8.6E-03	3.0	-4.9	
	2B	229	210-228	8.5E-05	6.0	-5.4	16FS2, 17FS2
	2D	160	160-164	3.1E-04	5.0	5.2	16FS2
	3A	330	330-331	6.6E-03	3.2	-3.9	16FS2
	4A	138	129-139	1.3E-03	4.2	-4.8	16FS2, 17FS2
	4D	27	27-27	4.4E-03	3.5	5.2	17FS2, 17SL
	5A	211	208-210	2.6E-03	3.8	4.7	
	5B	30	30-30	4.6E-03	3.5	-4.0	17SL
	5B	100	100-106	4.6E-03	3.5	-4.1	16FS2
	6A	250	249-250	3.9E-05	6.6	-5.9	16FS2, 17FS2
	6B	249	245-249	1.3E-04	5.7	5.2	17FS2, 17SL
	7A	148	138-149	5.8E-08	9.9	-9.3	16FS2, 17FS2, 17SL
	7A	213	192-214	1.3E-03	4.2	-5.2	17FS2, 17SL
	7B	56	56-56	8.7E-04	4.4	-6.1	17SL
	7B	248	248-248	4.6E-03	3.5	-4.1	17SL
PH [cm]					<b>51.7</b>		
	4B	75	75-75	1.3E-04	5.8	-7.8	16FS1, 16FS2, 17FS1, 17FS2, 17SL
	4D	27	27-27	1.7E-32	33.0	-12.5	16FS1, 16FS2, 17FS1, 17FS2, 17SL
	6A	160	124-160	1.4E-08	10.7	5.6	16FS1, 16FS2, 17FS1, 17FS2, 17SL
EET [DaM]					<b>24.6</b>		
	3A	229	215-244	2.9E-06	9.3	-1.1	16FS1, 16FS2, 17FS1, 17FS2, 17SL
	5A	182	182-206	5.7E-05	7.6	1.2	16FS1, 16FS2, 17FS1, 17FS2, 17SL
	5B	103	100-105	1.7E-03	4.7	0.8	16FS2, 17FS1, 17SL
	5D	234	234-234	1.4E-03	5.3	1.2	16FS1, 16FS2, 17FS1
	6A	250	250-251	1.9E-03	4.7	0.9	16FS1, 17FS1
	6D	66	66-67	2.9E-03	4.3	0.8	16FS2, 17FS1, 17FS2
LAD [1-9]					<b>26.3</b>		
	2B	173	127-205	4.2E-08	10.1	0.8	16FS1, 16FS2, 17FS1, 17SL
	2D	167	166-167	2.7E-03	4.0	-0.6	16FS1
	3A	184	184-184	8.7E-03	3.3	-1.1	
	4B	75	75-75	4.7E-03	3.7	1.0	16FS1
	5B	39	39-41	4.7E-03	3.8	-0.5	17FS1
	7A	90	90-90	2.9E-03	4.1	0.6	17FS1, 17SL

\* For each trait the explained phenotypic variance of the model fitting all detected QTL simultaneously is given in bold values above the individual  $R^2$  values for each QTL.